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TO
SUBCONTRACT SCHEDULE**

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SUBCONTRACT NO. *
UNDER
PRIME CONTRACT NO. DE-AC36-99GO10337

CONTRACTING PARTY: MIDWEST RESEARCH INSTITUTE
NATIONAL RENEWABLE ENERGY LABORATORY
DIVISION

SUBCONTRACTOR: *

ADDRESS: *

SUBCONTRACT TITLE: "*"

TYPE OF SUBCONTRACT: COST SHARING -- PHASED
OR
COST REIMBURSABLE -- PHASED

PERIOD OF PERFORMANCE: EXECUTION DATE THROUGH * (*) MONTHS

SUBCONTRACT AMOUNT:	SUBCONTRACTOR'S	NREL'S	
	<u>COST SHARE</u>	<u>COST SHARE</u>	<u>TOTAL</u>
	\$ * *	\$ * *	\$ *

PAYMENT TERMS: NET *

SUBCONTRACTOR'S *
REMITTANCE NAME
AND ADDRESS:

FUNDED AMOUNT AND
TASK CHARGE NUMBER: \$* -- * (5450)

SUBCONTRACT NO. *

BETWEEN

MIDWEST RESEARCH INSTITUTE

NATIONAL RENEWABLE ENERGY LABORATORY DIVISION

AND

*

SCHEDULE

INTRODUCTION

THIS SUBCONTRACT is effective upon execution by the Midwest Research Institute, National Renewable Energy Laboratory Division and is between the Midwest Research Institute, acting through its National Renewable Energy Laboratory Division (hereinafter called "NREL") and * (hereinafter called "Subcontractor"), whose principal offices are located in *.

Midwest Research Institute has entered into Contract No. DE-AC36-99GO10337 (hereinafter called "Prime Contract") with the Department of Energy (hereinafter called "DOE"), an agency of the U.S. Government (hereinafter called "Government"), for the operation and management of the National Renewable Energy Laboratory.

This subcontract is entered into in furtherance of the performance of the work provided for in the Prime Contract.

AGREEMENT

NOW, THEREFORE, the parties hereto agree to the following terms and conditions:

ARTICLE 1 - THE WORK TO BE PERFORMED

- A. The Subcontractor shall perform the work generally described as "*", and specifically provided for in Appendix A, Statement of Work, attached hereto and made a part hereof, pursuant to the provisions of this subcontract.
- B. Specific deliverables, quantities, due dates, reporting requirements, and addresses are set forth in Appendix A hereto.

ARTICLE 2 - THE PERIOD OF PERFORMANCE

- A. The period of performance under this subcontract shall be as follows:

Phase I: ** through **

Phase II: ** through **

- B. Each of these periods may be extended by mutual written agreement of the parties. NREL will make a decision, based on its sole judgement, whether or not to continue and incrementally fund each Phase prior to the completion date of each Phase. If all Phases are authorized by NREL, the total period of performance for the subcontract would be *** months. If NREL should decide not to authorize a Phase, the subcontract shall be considered complete upon submittal of the final version of the Annual Technical Report, with corrections as specified by NREL, if any.

ARTICLE 3 - ESTIMATED COST, COST SHARING, OBLIGATION OF FUNDS AND FINANCIAL LIMITATIONS

- A. Estimated Cost -- The estimated cost for the performance of the work conducted under this subcontract is \$*. It is agreed by the parties hereto that said total cost shall be shared as follows:

Estimated NREL Share:	\$	*	--	*%
Estimated Subcontractor Share:	\$	*	--	*%
Total:	\$	*	--	100%

This cost sharing formula shall also apply (on the percentage basis shown above) to any increase or decrease in the estimated total cost of subcontract performance, changes under the "Changes" clause and/or terminations under the "Terminations" clause contained in Appendix B.

- B. The estimated cost specified in A above is broken down as follows for this subcontract:

	<u>Estimated NREL Share</u>				<u>Estimated Subcontractor Share</u>				<u>Total Cost</u>	
Phase I:	\$	*	--	*%	\$	*	--	*%	\$	*
Phase II:	\$	*	--	*%	\$	*	--	*%	\$	*
Total:	\$	*	--	100%	\$	*	--	100%	\$	*

This cost sharing formula for each phase shall also apply (on the percentage basis shown above) to any increase or decrease in the estimated total cost of each phase of subcontract performance, changes under the "Changes" clause and/or terminations under the "Termination" clause contained in Appendix B.

3. The Subcontractor shall be paid for the work conducted under this subcontract in accordance with the clauses entitled "Allowable Cost and Payment" and "Cost Sharing Subcontract - No Fee" in Appendix B, and the article entitled "Invoices" in this schedule.
4. Pursuant to the "Limitation of Funds" clause in Appendix B, the amount of \$ *** has been allotted and is available for payment of NREL's estimated share of allowable costs for a portion of the work under this subcontract. It is estimated that the allotted amount will cover work under this subcontract through ***. This allotted amount presently obligated by NREL with respect to this subcontract, may be unilaterally increased by NREL by written notice to the Subcontractor, and may be increased or decreased by written agreement of the parties by formal

- modification of this subcontract.
5. The Subcontractor is authorized by NREL's execution of this subcontract to perform that portion of Phase I work for which funds have been allotted in Paragraph D above.
 6. The Subcontractor is cautioned that, subject to the provisions of the clauses entitled "Limitation of Funds" and "Limitation of Cost" contained in Appendix B, NREL is not presently obligated to reimburse the Subcontractor for costs incurred in excess of NREL's share of funds allotted in Paragraph D above for portions of authorized work under the subcontract, and (ii) shall not be obligated to reimburse the Subcontractor for costs incurred in excess of NREL's share of the total estimated costs in paragraph B above for full performance under the subcontract.
 7. The giving of any notice by either party under this article, the article entitled "The Period of Performance" in this Schedule or the clauses entitled "Limitation of Funds" and "Limitation of Cost" in Appendix B, as applicable, shall not be construed to waive or impair any rights of NREL to terminate this subcontract under the provisions of the termination clause(s) contained in Appendix B.

OR ARTICLE 3 - ESTIMATED COST, OBLIGATION OF FUNDS AND FINANCIAL LIMITATIONS

- A. Estimated Cost -- The estimated cost for the performance of the work conducted under this subcontract is \$*. The estimated cost is broken down as follows for Phase I and Phase II:**

Phase I:	\$	*
Phase II:	\$	*
Total:	\$	*

The Subcontractor is authorized by NREL's execution of this basic subcontract to perform Phase I under this subcontract.

- B. The Subcontractor shall be paid for the work conducted under this subcontract in accordance with the clause entitled "Allowable Cost and Payment" contained in Appendix B and the article in this Schedule entitled "Invoices." The Subcontractor is cautioned that, subject to the provisions of the clause entitled "Limitation of Funds" and "Limitation of Cost" contained in Appendix B, NREL is not obligated to reimburse the Subcontractor for costs incurred in excess of the amount set forth in Paragraph A above.**
- C. Pursuant to the clause entitled "Limitation of Funds" contained in Appendix B, the amount of \$* has been allotted and is available for payment of allocable and allowable costs under this subcontract. It is estimated that the allotted amount will cover work under this subcontract through *.**
- D. The amount of \$*, presently obligated by NREL with respect to this subcontract, may be unilaterally increased by NREL by written notice to the Subcontractor, and may be increased or decreased by written agreement of the parties by formal modification of this subcontract.**

- E. The giving of any notice by either party under this article, the article entitled "The Period of Performance" in this Schedules or the clauses entitled "Limitation of Funds" and "Limitation of Cost" in Appendix B, as applicable, shall not be construed to waive or impair any rights of NREL to terminate this subcontract under the provisions of the termination clause(s) contained in Appendix B.

ARTICLE 4 - LIMITATION OF FUNDS AND LIMITATION OF COST -- SPECIAL (JULY 1999)

The "Limitations of Funds" clause contained in Appendix B shall be operable during such time that NREL incrementally allots additional funds to this subcontract as set forth in Article 3 - Estimated Cost, Cost Sharing, Obligations of Funds, and Financial Limitations. (The Limitations of Cost clause shall be inoperable during such time.)

The "Limitations of Cost" clause contained in Appendix B shall become operable at such time that NREL allots to this subcontract an amount equal to the total estimated NREL cost share set forth in Article 3 - Estimated Cost, Cost Sharing, Obligations of Funds, and Financial Limitations. (The Limitations of Funds clause shall be inoperable at such time.)

ARTICLE 5 - WAIVER OF FACILITIES CAPITAL COST OF MONEY (SEP 1987)

The Subcontractor did not include facilities capital cost of money as a proposed cost of this subcontract. Therefore, it is an unallowable cost under this subcontract.

ARTICLE 6 - APPLICABLE DOCUMENTATION

In addition to the terms and conditions contained in this Schedule, the following documents are attached hereto and made a part of this subcontract:

- A. Appendix A, entitled "Statement of Work" dated *.
- B. Appendix B-*, entitled "Standard Terms and Conditions" dated *.
- C. Appendix C-*, entitled "Intellectual Property Provisions" dated *.
- D. Appendix D-*, entitled "Clauses for Subcontracts in Excess of \$500,000" dated *.
- E. Appendix F, entitled "Small Business and Small Disadvantaged Business Subcontracting Plan" dated *.
- F. Subcontractor's technical proposal number * dated *, together with any revisions, is hereby incorporated by reference. In the event there is a conflict between the Subcontractor's technical proposal and any other provisions of this subcontract, the latter shall prevail.

ARTICLE 7 - ORDER OF PRECEDENCE

Any inconsistency in this subcontract, shall be resolved by giving precedence in the following order:

- A. This Schedule;

- B. Statement of Work (Appendix A);
- C. Standard Terms and Conditions (Appendix B-*);
- D. Intellectual Property Provisions (Appendix C-*);
- E. Clauses for Subcontracts in Excess of \$500,000 (Appendix D-*);
- F. Small Business and Small Disadvantaged Business Subcontracting Plan (Appendix F);
- H. Other provisions of this subcontract whether incorporated by reference or otherwise; and
- I. The Subcontractor's technical proposal, if incorporated in this subcontract by reference or otherwise.

ARTICLE 8 - RIGHTS TO PROPOSAL DATA

Except for technical data contained on pages (None) of the subcontractor's proposal dated * which are asserted by the Subcontractor as being proprietary data, it is agreed that, as a condition of the award of this subcontract, and notwithstanding the provisions of any notice appearing on the proposal, the Government and NREL shall have the right to use, duplicate, disclose and have others do so for any purpose whatsoever, the technical data contained in the proposal upon which this subcontract is based.

ARTICLE 9 - SUBCONTRACT ADMINISTRATION RESPONSIBILITIES

- A. Signature Authority: This subcontract may only be modified by a formal modification signed by an authorized official of NREL.
- B. Subcontract Administration Responsibilities: The authorized official of NREL has designated *, as the Subcontract Administrator for this subcontract with the responsibilities for subcontract administration and negotiation of any modifications to this subcontract. The Subcontract Administrator's telephone number is (303) 384-.*.
- C. Technical Monitoring Responsibilities: The authorized official of NREL has designated *, as the Technical Monitor for this subcontract with the responsibilities of monitoring the technical work or services to be performed under this subcontract. The Technical Monitor does not have the authority to make any commitments or authorize any changes which may affect the subcontract's cost, scope of work, terms, or conditions. Any such changes shall be referred to the Subcontract Administrator designated in Paragraph B above. The Technical Monitor's telephone number is (303) 384-.*.

ARTICLE 10 - KEY PERSONNEL

- A. **It having been determined that the individuals, whose names appear below, are necessary for the successful performance of this subcontract, the Subcontractor agrees to assign or have assigned such individuals to the performance of the work under this subcontract and shall not reassign or remove any of them without the consent of the Subcontract Administrator by modification to this subcontract:**

Name

Project Title

Telephone No.

*

*

*

- B. Whenever, for any reason, one or more of the designated key personnel designated above, is unavailable for assignment for work under this subcontract, the Subcontractor shall, with the approval of the Subcontract Administrator, replace such individual with an individual of substantially equal abilities and qualifications.

ARTICLE 11 - INVOICES

Invoices for work accomplished under this subcontract shall be submitted in an original and one copy to:

National Renewable Energy Laboratory
Attention: *
1617 Cole Boulevard
Golden, Colorado 80401-3393

To facilitate processing and payment each invoice must reference the subcontract number which appears on the cover of this subcontract. Payments under this subcontract shall be made in accordance with the payment terms and to the Subcontractor's remittance name and address shown on the cover sheet of this subcontract. Final payment under this subcontract shall be made upon execution of the closeout modification by both parties hereto (including receipt of an appropriately signed Release of Claims, appropriately signed Assignment of Refunds, Rebates, Credits and Other Amounts, final property disposition, and patent clearances, if required).

The payment terms of this subcontract shall mean net days from the date of receipt of an acceptable invoice or the date of receipt and acceptance of all deliverables or reporting requirements for the period covered by the invoice, whichever is later.

The Subcontractor shall submit its invoices in reasonable detail, broken down by category, showing the total cost incurred both currently and cumulatively less the Subcontractor's cost share and the resultant NREL cost share. An authorized official of the Subcontractor shall sign the following certification on each invoice submitted for payment:

"I certify that this invoice is correct and proper for payment, and reimbursement for these costs has not and will not be received under any other Government contract or subcontract or other source of Government funds.

Authorized Official

Date"

The Subcontractor is hereby notified that NREL may withhold payment on invoices submitted, if the Subcontractor has failed to comply with or is delinquent in the submission of the reporting or deliverable requirements under this subcontract, until such time as the Subcontractor has complied or submitted such reporting or deliverable requirements.

ARTICLE 12 - INDIRECT RATES

- A. The following rates were utilized in the negotiation of the estimated cost for this subcontract:

<u>Category</u>	<u>Subcontract Period Covered</u>	<u>Rate</u>	<u>Base</u>
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The Subcontractor shall utilize its current indirect rates, during the period of this subcontract, as billing/invoicing rates. In accordance with the clauses entitled "Allowable Cost and Payment", "Limitation of Funds", and "Limitation of Cost," the Subcontractor shall notify the Subcontract Administrator immediately, when its current indirect rates and the rates utilized in the negotiation of this subcontract's estimated cost differ significantly such that the Subcontractor has or should have reason to anticipate the incurrence of costs which are in excess of, or are substantially less than, the amount set forth in Article 3 of this subcontract schedule. Such notice from the Subcontractor shall include indirect rate cost calculation and supporting data, the cost impact to the subcontract by cost categories, and proposed technical approaches for handling the potential overrun or underrun under this subcontract.

- B. In accordance with the clause entitled "Allowable Cost and Payment," the following rates shall be applied as ceiling rates to the allowable costs for the recovery of indirect costs against this subcontract if upon completion, finalization and negotiation of the actual indirect rates for the appropriate periods covered by this subcontract, the actual indirect rates exceed the following ceiling rates:

<u>Category</u>	<u>Subcontract Period Covered</u>	<u>Rate</u>	<u>Base</u>
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- C. The Subcontractor is cautioned that, pursuant to the clause entitled "Limitation of Cost," if this subcontract is fully funded or the clause entitled "Limitation of Funds" if this subcontract is incrementally funded, NREL shall not be obligated to reimburse the Subcontractor for indirect or direct costs incurred in excess of the allotted amount set forth in Article 3 of this subcontract schedule. This shall also apply to overruns created by an indirect rate fluctuation that the Subcontractor, as a prudent businessperson, should have been aware of, and should have informed NREL of, at the time.

ARTICLE 13 - PUBLIC DISCLOSURE

- A. Publicity release of any nature in connection with this subcontract shall not be made by the Subcontractor without prior review and approval of the NREL Subcontract Administrator.
- B. The Subcontractor should particularly note that all papers and documents which are required for submittal and distribution for patent clearance under this subcontract should first be submitted to the Department of Energy, Intellectual Property Law Division, Chicago Operations Office, 9800 South Cass Avenue, Argonne, Illinois 60439 prior to distribution to the public. This requirement of patent clearance prior to publication of all Subcontractor's reports is specifically required and set forth in

Appendix C hereof.

ARTICLE 14 - SMALL BUSINESS SUBCONTRACTING PLAN

The Subcontractor's Small Business Subcontracting Plan dated * is hereby incorporated as Appendix F in this subcontract. The Subcontractor hereby agrees to submit the "Subcontracting Report for Individual Contracts" (Standard Form 294) semi-annually based upon the Government's fiscal year (October 1 through September 30) and at subcontract completion in accordance with the instructions on the form. This report is due on or before the twenty-fifth (25th) day of the month following the close of the applicable period. The Subcontractor shall also submit the "Summary Subcontract Report" (Standard Form 295) annually at the close of each Government fiscal year, in accordance with the instructions on the form. The original plus two (2) copies of these reports shall be submitted to the subcontract administrator.

The reports shall be sent to the following address:

**National Renewable Energy Laboratory
Attn: (Subcontract Administrator)
Contracts and Business Services
1617 Cole Boulevard
Golden, CO 80401-3393**

ARTICLE 15 - INTEGRATION

This subcontract contains the entire understanding between the parties, and there are no understandings or representations except those set forth or incorporated by reference herein. No subsequent modifications of this subcontract shall be of any force or effect unless in writing signed by a duly authorized official of NREL.

IN WITNESS WHEREOF, the parties hereto have executed this subcontract as of the date fully signed below.

ACCEPTED: *

AUTHORIZED: MIDWEST RESEARCH INSTITUTE
NATIONAL RENEWABLE ENERGY LABORATORY
DIVISION

BY: _____

BY:

TITLE: _____

TITLE:

DATE: _____

DATE: